

In the Claims

1-61 (canceled).

62 (currently amended). An antibody that induces superagonistic signaling by a cell surface receptor, wherein said antibody binds to the extracellular portion of the human PD-1 receptor at a membrane proximal region and said antibody binds to an epitope comprising SEQ ID NO: 44, SEQ ID NO: 46, SEQ ID NO: 48, SEQ ID NO: 50, SEQ ID NO: 52, SEQ ID NO: 54, SEQ ID NO: 56 or SEQ ID NO: 61, wherein:

a) said antibody does not bind only bind to a peptide consisting of LAAFPEDRSQPGQDCR (SEQ ID NO: 61), the human PD-1 equivalent of the C'-D loop of human CD28; and

b) said antibody induces superagonistic signaling of the PD-1 receptor by binding to a membrane proximal region of the human PD-1 receptor that is within 75 Å of a cell surface or wherein said antibody binds to a membrane proximal region of human PD-1 expressed on the surface of a cell and holds the cell surface within 200 Å of a substrate to which said antibody is immobilized.

63-65 (canceled).

66 (previously presented). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 44.

67 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 46.

68 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 48.

69 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 50.

70 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 52.

71 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 54.

72 (withdrawn). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 56.

73 (previously presented). The antibody according to claim 62, wherein said antibody binds to an epitope comprising SEQ ID NO: 61.

74 (new). The antibody according to claim 62, wherein said antibody is a monoclonal antibody.

75 (new). The antibody according to claim 74, wherein said antibody is a humanized antibody.

76 (new). The antibody according to claim 74, wherein said antibody is a complementarity determining region (CDR)-grafted antibody.

77 (new). The antibody according to claim 74, wherein said antibody is a chimeric antibody.

78 (new). The antibody according to claim 62, wherein said antibody induces superagonistic signaling of the PD-1 receptor by binding to a membrane proximal region of the human PD-1 receptor that is within 60 Å of a cell surface.

79 (new). The antibody according to claim 62, wherein said antibody induces superagonistic signaling of the PD-1 receptor by binding to a membrane proximal region of the human PD-1 receptor that is within 50 Å of a cell surface.

80 (new). The antibody according to claim 62, wherein said antibody induces superagonistic signaling of the PD-1 receptor by binding to a membrane proximal region of the human PD-1 receptor that is within 40 Å of a cell surface.

81 (new). The antibody according to claim 62, wherein said antibody binds to a membrane proximal region of human PD-1 expressed on the surface of a cell and holds the cell surface within 180 Å of a substrate to which said antibody is immobilized.

82 (new). The antibody according to claim 62, wherein said antibody binds to a membrane proximal region of human PD-1 expressed on the surface of a cell and holds the cell surface within 150 Å of a substrate to which said antibody is immobilized.

83 (new). The antibody according to claim 62, wherein said antibody binds to a membrane proximal region of human PD-1 expressed on the surface of a cell and holds the cell surface within 120 Å of a substrate to which said antibody is immobilized.